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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,436	03/27/2001	Remi Delansorne	01056	5099

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EXAMINER	
DESAI, ANAND U	

ART UNIT	PAPER NUMBER
1653	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/787,436	DELANSORNE ET AL.	
	Examiner	Art Unit	
	Anand U. Desai, Ph.D.	1653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *79-98* is/are pending in the application.

4a) Of the above claim(s) *81,83,85,86,88-91,94 and 96* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *79, 80, 82, 84, 87, 92, 93, 95, 97, and 98* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 5, 2006 has been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Newly submitted claims 79, 81, 83, 85, 86, 88-91, 94, and 96 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The claims acted upon by the Office on their merits determine the invention elected by the applicant in the application, and in any request for continued examination (RCE) which has been filed for the application (see MPEP § 818.02(a)).

In the response to the election/restriction action mailed January 28, 2003, dated July 23, 2004, the Applicants elected Group I, claims 21-28, 32-41, 45-52, and 58-78, drawn to a pharmaceutical composition of LH-RH peptide analogue in combination with α-cyclodextrin, and further elected the LH-RH analogue of formula [D-Leu^6-Npg^7-Pro^{9}NHEt]LH-RH, which is pGlu-His-Trp-Ser-Tyr-D-Leu-Npg-Arg-Pro-NHC_2H_5 for examination. Newly submitted claims encompass distinct inventions, including inventions from previously restricted group II, wherein

the LH-RH peptide is defined by formula (I') and further defined by formula (II') through formula (IV').

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 79, 81, 83, 85, 86, 88-91, 94, and 96, drawn to previously restricted LH-RH peptide analogues are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 79, 80, 82, 84, 87, 92, 93, 95, 97, and 98, drawn to a pharmaceutical composition of LH-RH peptide analogue in combination with α-cyclodextrin, and methods of using said pharmaceutical composition, wherein the LH-RH peptide analogue is defined by formula (I) and further defined by formula (II) through formula (IV) are currently under examination.

Maintenance of Objections and Rejections

Claim Objections

4. Claim 92 is objected to because of the following informalities: The description of R_2 in the variable Z has a typographical error. There are extra spaces between the phrase "R_2 is a (C_1-C_4) alkyl". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 79, and 92 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. In claims 79, and 92, it is unclear how A4 is a variable? The amino acid at position 4, A4, is not a variable. It appears to be only Ser.

8. Claims 79, and 92 recite non-elected subject matter and therefore does not particularly point out and distinctly claim the subject matter which applicant regards as the elected invention. The claims are drawn to previously restricted LH-RH peptide analogues identified as I' to IV'.

Claim Rejections - 35 USC § 102

9. Claims 92, 93, 95, 97, and 98 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirai et al. (U.S. 4,659,696). Hirai et al. teaches an LH-RH analog which is a polypeptide having the formula pGlu-His-Trp-Ser-Tyr-D-Ala-Leu-Arg-Pro-NHC_2H_5 (or leuprorelin) and 5 g of alpha-cyclodextrin. This analog fits the formula of A, I, II, III, and IV defined in claims 92, 93, 95, 97, and 98. Tri-O-methylcyclodextrin is also taught (column 4, line 33). "Absorption enhancer" in claim 98 is being interpreted as any excipient or pharmaceutical carrier that would increase the stability of the peptide. Thus, the excipient or pharmaceutical carriers used by Hirai et al. would meet this limitation.

Claim 92 recites limitations that refer to the intended use of the pharmaceutical formulation. Where it is possible that structural differences exist between the formulation of Hirai et al. and that of the present invention, there is nothing recited in the claims that distinguishes the present invention from the prior art.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 79, 80, 82, 84, 87, 92, 93, 95, 97, and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirai et al. (U.S. 4,659,696) in view of Mehlem (U.S. 2003/0162721 A1).

13. Hirai et al. teaches an LH-RH analog which is a polypeptide having the formula pGlu-His-Trp-Ser-Tyr-D-Ala-Leu-Arg-Pro-NHC_2H_5 (or leuprorelin) and 5 g of alpha-cyclodextrin. This analog fits the formula of A, I, II, III, and IV defined in claims 92, 93, 95, 97, and 98. Tri-O-methylcyclodextrin is also taught (column 4, line 33). "Absorption enhancer" in claim 98 is being interpreted as any excipient or pharmaceutical carrier that would increase the stability of the peptide. Thus, the excipient or pharmaceutical carriers used by Hirai et al. would meet this limitation.

Claim 92 recites limitations that refer to the intended use of the pharmaceutical formulation. Where it is possible that structural differences exist between the formulation of Hirai et al. and that of the present invention, there is nothing recited in the claims that distinguishes the present invention from the prior art.

The present method claims are directed to a method of orally administering an LH-RH analog with alpha-cyclodextrin. Whereas *Hirai et al.*, teach the composition of the claims, non-oral administration routes are taught as the preferred method of administration. Thus, *Hirai et al.* does not expressly teach a method of oral administration, but only allows an inference that a method was employed with reduced success. However, the teachings of Mehlem teach that peptides for oral administration are made up as capsules that may contain alpha-cyclodextrin. Mehlem employs alpha-cyclodextrin for the oral administration of peptides which is the problem that the present invention seeks to resolve. Thus, it would have been obvious to the person of ordinary skill in the art at the time the invention was made to combine the LH-RH peptides of *Hirai et al.* with alpha-cyclodextrin for the purposes of oral administration. A person of ordinary skill in the art would have been motivated to use the formulation for administration as capsules comprising alpha-cyclodextrin have been used for the oral administration of peptides with some success. Thus, the claimed invention was within the ordinary skill in the art to make and use at the time it was made and was as a whole, *prima facie* obvious.

14. All references were previously cited.

Conclusion

15. No claims are allowed.

16. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand U. Desai, Ph.D. whose telephone number is (571) 272-0947. The examiner can normally be reached on Monday - Friday 9:00 a.m. - 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon P. Weber can be reached on (517) 272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 20, 2006

Jon Weber
Supervisory Patent Examiner